### Accepted Manuscript

Lignin fractionation from *E. globulus* kraft liquor by ultrafiltration in a three stage membrane sequence

Carina A. Esteves Costa, Paula C. Rodrigues Pinto, Alírio E. Rodrigues

PII: S1383-5866(17)31755-0

DOI: https://doi.org/10.1016/j.seppur.2017.09.066

Reference: SEPPUR 14075

To appear in: Separation and Purification Technology

Received Date: 1 June 2017

Revised Date: 12 September 2017 Accepted Date: 27 September 2017



Please cite this article as: C.A. Esteves Costa, P.C. Rodrigues Pinto, A.E. Rodrigues, Lignin fractionation from *E. globulus* kraft liquor by ultrafiltration in a three stage membrane sequence, *Separation and Purification Technology* (2017), doi: https://doi.org/10.1016/j.seppur.2017.09.066

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## **ACCEPTED MANUSCRIPT**

# Lignin fractionation from E. globulus kraft liquor by ultrafiltration in a three stage membrane sequence

Carina A. Esteves Costa\*, Paula C. Rodrigues Pinto<sup>†</sup>, Alírio E. Rodrigues

Laboratory of Separation and Reaction Engineering - Laboratory of Catalysis and Materials (LSRE-LCM), Department of Chemical Engineering, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias s/n, 4200-465 Porto. Portugal

<sup>†</sup> current address: Forest and Paper Research Institute - RAIZ, Aveiro, Portugal

\*Corresponding author: Carina Costa

Laboratory of Separation and Reaction Engineering - Laboratory of Catalysis and Materials (LSRE-LCM), Department of Chemical Engineering, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias s/n, 4200-465 Porto, Portugal carina.costa@fe.up.pt

#### **Abstract**

The aim of this work is to evaluate the fractionation of *E. globulus* industrial kraft liquor by ultrafiltration. A sequential membrane process, using three tubular membranes with nominal cut-offs of 5, 15 and 50 kDa, was applied and the results showed that ultrafiltration is an efficient process for kraft liquor fractionation according to its molecular weight. The obtained ultrafiltration fractions, retentates from 5, 15 and 50 kDa membranes and also permeate from 5 kDa membrane, were studied and the differences between its composition and properties

#### Download English Version:

# https://daneshyari.com/en/article/4989448

Download Persian Version:

https://daneshyari.com/article/4989448

<u>Daneshyari.com</u>